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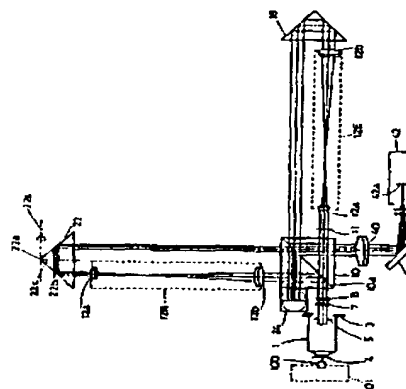
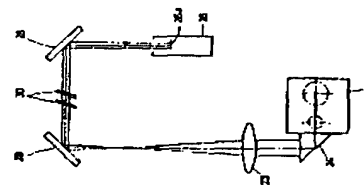
APPLICATION DATE : 02-10-89
APPLICATION NUMBER : 01258118

APPLICANT : ASAHI OPTICAL CO LTD;

INVENTOR : IKI MAKOTO;

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TITLE : INTERFERENCE DEVICE FOR WAVE
FRONT ABERRATION MEASUREMENT



ABSTRACT : PURPOSE: To analyze interference fringes without any lateral shift in the position of an image on a wave front to be measured by providing a means which slants the traveling direction of object luminous flux to an optical axis and a means which sets the position where the object luminous flux slants and an opening in conjugate relation.

CONSTITUTION: On a surface 22b on the bisector 22c of a right angled prism 22, an image of the opening 5 is formed (intermediate image formation) through a reduction optical system 12R. When the prism 22 is rotated on an axis 22s by an extremely small angle, the image of the position of the opening 5 is obtained on the image pickup surface 26a of a TV camera 26 through the optical system 12R at an extremely fine angle to luminous flux (reference luminous flux) passed through an enlargement optical system 12E to obtain tilt fringes, which are analyzed to measure a spherical aberration with high accuracy. When the prism 22 is rotated at this time, the intermediate image formation surface 22b is at a fixed point, so the position relation between the position (wave front to be measured) in conjugate relation with the surface 22b and the surface 26a (interference surface) is not effected by the rotation of the prism 22 at all. Therefore, the image of the position of the opening 5 formed on the surface 26a does not shift laterally in position and measurement is accurately taken.

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